

Work Order ID 128849

128849

Page 1

Tuesday, January 27, 2015 7:49:43 AM

Item ID: D4297-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Bearpaw

Start Date: 1/26/15

Start Qty: 2.00

2

Cust Item ID:

Required Date: 1/26/15

Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan:

MLS

Date:

15-01-29

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D4297

C

120

0.00

120

FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet -

Cut Blank as per D2432 File

3

Ø

Jm15-2-6

130

0.00

130

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Inspect material for defects or damage prior to machining

2-Machine as per Folio FA028 and Dwg

DWG REV: AT

FOLIO REV: C

3-Deburr

3

Ø

Jm15-2-6

15/03/13

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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128849

Tuesday, January 27, 2015 7:49:43 AM

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

?

Cust Item ID:

Start Date: 1/26/15 **Start Qty:** 2.00

Required Date: 1/26/15 **Req'd Qty:** 2.00

~

Customer:

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

140

QC2- Inspect parts off machine FAI/FAIB

0.00

140

QC

Memo

0.00

Quality Control

150

QC8- Inspect parts - second check

0.00

150

QC

Memo

0.00

Quality Control

151

Identify as per dwg & Stock Location: Store 0.00

0.00

151

Packaging

Memo

0.00

Packaging

DQA: _____ Date: _____



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Transport									
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FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

Work Order ID 128849***128849***

Page 3

Tuesday, January 27, 2015 7:49:43 AM

Item ID: D4297-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bearpaw

Start Date: 1/26/15

Start Qty: 2.00

2

Cust Item ID:

Required Date: 1/26/15

Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC21 - Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

MCS 15-03-16

H/S-3-16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Picklist Print

Tuesday, January 27, 2015 7:49:42 AM

Page 1

Work Order ID: 128849

128849

Parent Item: D4297-1

D4297-1

Parent Item Name: Bearpaw

Start Date: 1/26/15

Required Date: 1/26/15

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A NEW ISSUE 11-01-05 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

MUHMWB10

Purchased

No

sf

377.8895

**

MIJHMWB10

UHMW 1" Black - 48"x120" Tivar Mfg.#52480104

8
125
Jm15-2-6

Location

Loc Qty

Loc Code

MAT018

377.8895

m128092

1.7225

m131335

376.167

131661

131661

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

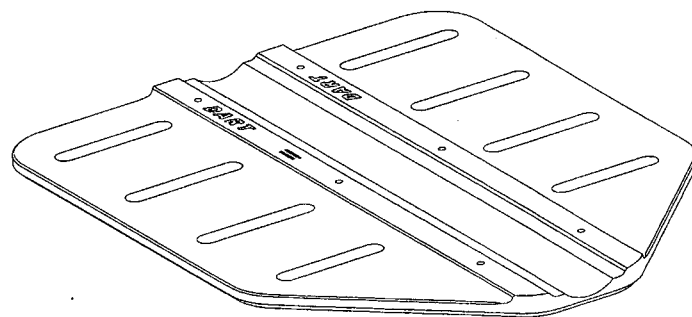
Work Order update only ☐

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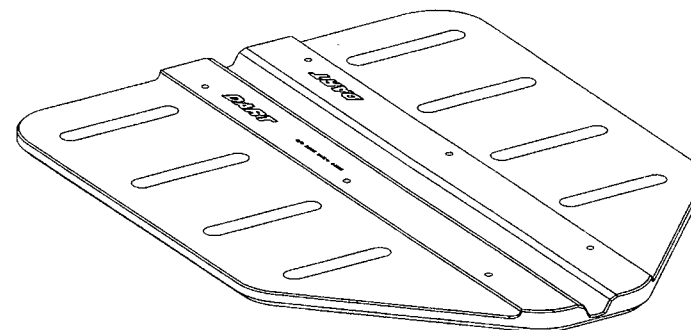
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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D4297-1 BEARPAW

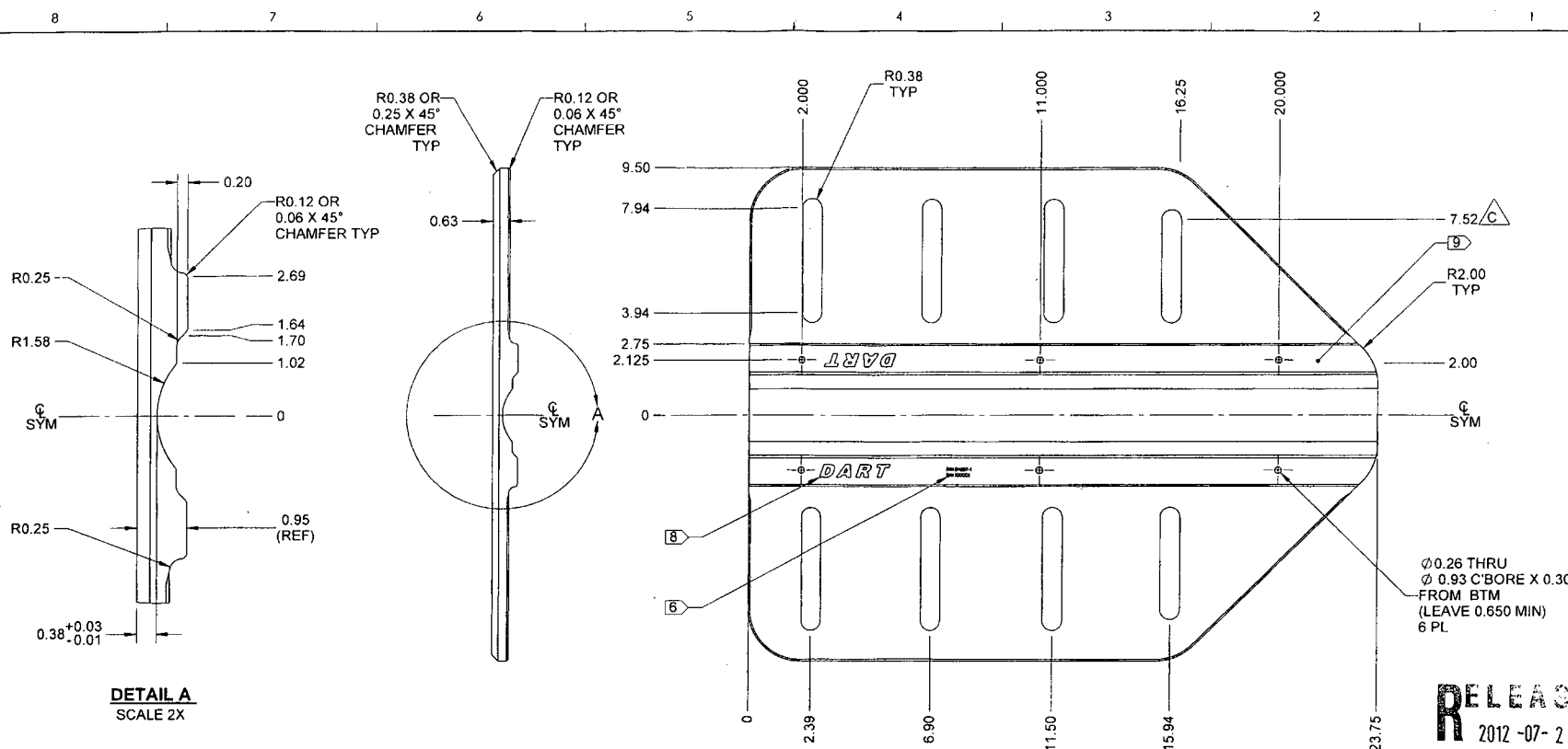


D4297-3 BEARPAW

128849 MJS
15-01-29

RELEASED
2012-07-23
wp

C	REVISED DRAWING FORMAT, ADDED D4297-3; ADDED DIMENSION T.52 (D1-2)	AP	12.07.13
B	BOTTOM CHAMFER CHANGED FROM 0.125" TO 0.250", ZN B8-2; TOP CHAMFER CHANGED FROM .125" TO 0.062", ZN C8-2 (REF PAR 11-80)	XDF	11.10.25
A	NEW ISSUE	RF	10.12.15
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	AJS	DRAWING NO.	REV. C
MFG. APPR.	21	D4297	SHEET 1 OF 3
APPROVED	149	TITLE	SCALE
DE APPR.	14	BEARPAW	NTS
DATE	12.07.13	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



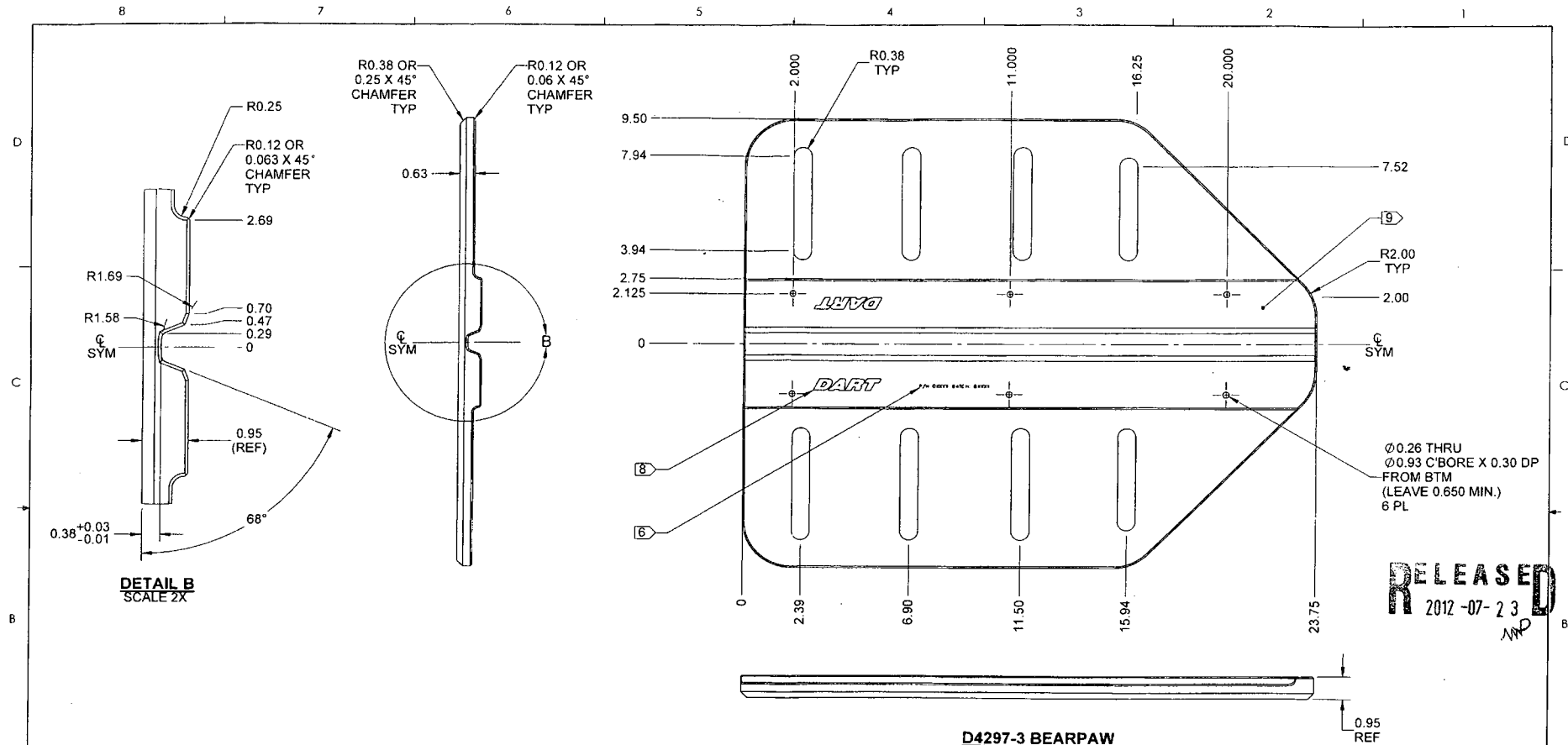
DETAIL A
SCALE 2X

D4297-1 BEARPAW

- NOTES:**
- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL, 1.000 THICK MACHINED TO 0.950 (REF DART SPEC. MUHMWB10)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: ENGRAVE PART NUMBER "D4297-1" AND BATCH NUMBER "BXXXX" IN ACCORDANCE WITH QSI 044 METHOD 6.3
 - 7) WEIGHT: 8.18 lbs
 - 8) ENGRAVE DART LOGO TO MAX DEPTH OF 0.012
 - 9) APPLY 0.06 x 45° CHAMFER TO ALL EDGES ON SIDE SHOWN UNLESS OTHERWISE INDICATED
 - 10) PROFILE PER DRAWING FILE "D4297-1-REVC.STP"

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ALS	DRAWING NO.	REV. C
MFG. APPR.	AP	D4297	SHEET 2 OF 3
APPROVED	AP	TITLE	SCALE
DE APPR.	AP	BEARPAW	NTS
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RELEASE
2012-07-23



NOTES:

- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL, 1.000 THICK MACHINED TO 0.950 (REF DART SPEC. MUHMWB10)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART NUMBER "D4297-3" AND BATCH NUMBER "BXXXXX" IN ACCORDANCE WITH QSI 044 METHOD 6.3
- 7) WEIGHT: 8.67 lbs
- 8) ENGRAVE DART LOGO TO MAX DEPTH OF 0.012
- 9) APPLY 0.06 x 45° CHAMFER TO ALL EDGES ON SIDE SHOWN UNLESS OTHERWISE INDICATED
- 10) PROFILE PER DRAWING FILE "D4297-3-REVC.STP"

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AS	DRAWING NO.	REV. C
MFG. APPR.	AS	D4297	SHEET 3 OF 3
APPROVED	MS	TITLE	SCALE
DE APPR.	MS	BEARPAW	NTS
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